

AMENDMENTS TO THE CLAIMS

Please amend claim 1, and cancel claim 2 without prejudice, such that the status of the claims is as follows:

1. (Currently amended) A method of forming a reader of a magnetic head, the method comprising:

forming a sensor with an air bearing surface;

forming a hard mask on the sensor extending from the air bearing surface a distance substantially equal to a desired stripe height of the sensor, wherein forming the hard mask comprises:

depositing a hard mask layer over an entire top surface of the sensor;

patterning a photoresist mask on a first portion of the hard mask layer; and

removing a second portion of the hard mask layer not covered by the photoresist mask; and

removing a portion of the sensor not covered by the hard mask to define the desired stripe height of the sensor.

2. (Canceled)

3. (Withdrawn) The method of claim 1, further comprising thinning the hard mask during the removal of the portion of the sensor not covered by the hard mask.

4. (Original) The method of claim 1, further comprising forming a first half gap prior to the formation of the sensor such that the sensor is formed above the first half gap.

5. (Withdrawn) The method of claim 3, further comprising forming a second half gap over the thinned hard mask.

6. (Withdrawn) The method of claim 5, further comprising forming the second half gap over a back edge of the sensor.

7. (Original) The method of claim 1, wherein forming a sensor comprises forming a giant magnetoresistive sensor.
8. (Original) The method of claim 1, wherein removing the portion of the sensor not covered by the hard mask further comprises forming a steep back edge on the sensor.
9. (Withdrawn) The method of claim 1, wherein removing the portion of the sensor not covered by the hard mask further comprises steep dry etching the portion of the sensor not covered by the hard mask.
10. (Original) The method of claim 1, wherein forming a hard mask comprises forming a hard mask of an insulating material.
11. (Original) The method of claim 1, wherein forming a hard mask comprises forming a hard mask of aluminum nitride.
12. (Original) The method of claim 1, wherein forming a hard mask comprises forming a hard mask of aluminum oxide.
- 13-14 (Canceled)
15. (Previously presented) A method of forming a reader of a magnetic head, the method comprising:
 - forming a first half gap;
 - forming the reader on the first half gap;
 - forming a hard mask on the reader;
 - patterning a photoresist mask on a first portion of the hard mask;
 - removing a portion of the hard mask not covered by the photoresist mask;
 - removing the photoresist mask;
 - removing a portion of the reader not covered by the hard mask to form a back edge of the reader that defines a stripe height of the reader; and

forming a second half gap over the hard mask, adjacent the back edge of the reader, and over a portion of first half gap not covered by the reader.

16. (Original) The method of claim 15, wherein removing a portion of the reader not covered by the hard mask comprises end point steep dry etching a portion of the reader not covered by the hard mask.